



FINAL NAVAL AIR STATION ALAMEDA Restoration Advisory Board (RAB) Meeting Minutes

March 3, 2011

www.bracpmo.navy.mil

Building 1, Suite 140, Community Conference Center
Alameda Point
Alameda, California

The following participants attended the meeting:

Co-Chairs:

Derek Robinson	Base Realignment and Closure (BRAC) Program Management Office (PMO) West, BRAC Environmental Coordinator (BEC), Navy Co-chair
Dale Smith	Restoration Advisory Board (RAB) Community Co-chair

Attendees:

RAB Members

Joan Konrad	James Leach	Kurt Peterson
Jean Sweeney	Jim Sweeney	Michael John Torrey

Community Members/ Public Attendees

Steve Bachofer	Gretchen Lipow	Irene Dieter
Carol Gottstein, M.D.	Richard Bangert	Daniel Hoy

Navy Members

Bill McGinnis	Navy Lead Remedial Project Manager (LRPM)
Curtis Moss	Navy Remedial Project Manager (RPM)

Regulatory Agencies

Dave Cooper
James Fyfe

U.S. Environmental Protection Agency (EPA)
California Environmental Protection Agency Department
of Toxic Substances Control (DTSC)

Melinda Garvey
Karen Taberski

EPA
San Francisco Bay Regional Water Quality Control Board
(Regional Water Board)
Regional Water Board

John West

City of Alameda Representatives

Doug deHaan
Peter Russell

Alameda City Council
Russell Resources/ Alameda Reuse and Redevelopment
Agency (ARRA)

Contractors

John McGuire
John McMillan
Campbell Merrifield
Tommie Jean Valmassy

Shaw Environmental, Inc.
Shaw Environmental, Inc.
Trevet Environmental Consultants
Tetra Tech EM Inc.

The meeting agenda is provided as Attachment A.

MEETING SUMMARY

Dale Smith (RAB Community Co-chair) called the March 2011 former Naval Air Station Alameda (Alameda Point) RAB meeting to order at 6:30 p.m. Derek Robinson (Navy Co-Chair) welcomed all to the meeting.

I. Approval of February 3, 2011 RAB Meeting Minutes

Ms. Smith asked for comments on the February 2011, RAB meeting minutes.

Jean Sweeney (RAB member) provided the following comments:

- Page 5, third paragraph, ninth sentence: Mrs. Sweeney said she made a comment similar to that of Joan Konrad's (RAB member), and would like the minutes to reflect that the burn layer extends under the riprap and into the San Francisco Bay. She said she would like the Navy to have been more forthcoming during the discussion of the new information explaining why they had not considered additional excavation as they had done at other sites, but instead elected to postpone more work for a year. Ms. Smith stated that since the comment was not made by Mrs. Sweeney during the February

meeting, it should not be added to those minutes. It was suggested that Mrs. Sweeney's comment instead be added to the March 3, 2011 minutes as a comment during the comment period. Mrs. Sweeney agreed; no change will be made to the February minutes.

Ms. Smith provided the following comments:

- Page 6, third paragraph: Please add the following sentence to the end of the paragraph, "The Veteran's Administration (VA) transfer also is not expected to occur this year."
- Page 7, first paragraph, fifth sentence: "Enviro-Stor" is a California Department of Toxic Substances (DTSC) website, not Water Board, please revise the sentence accordingly.
- Page 7, third paragraph, third sentence: Referencing Mr. Humphrey's statement, "He suspects there were 12 to 15 ships buried and doubts they were removed, so there could still be oil present in the hulls." Please clarify that he was referring to NAS Alameda as follows, "He suspects there were 12 to 15 ships buried at NAS Alameda and doubts they were removed, so there could still be oil present in the hulls." Mr. Humphreys was not present at the meeting and Ms. Smith agreed to contact him to be sure the revision is correct.
- Page 9, top of the page: Please insert a sentence before the last sentence that reads, "Ms. Smith stated that is unworkable if there is a deadline for comments before the next meeting."
- Page 9, first full paragraph, last sentence: "Ms. Smith noted that former Naval Station Treasure Island is successfully treating a plume similar to the plume at OU-2C with bacteria and suggested the Alameda team consider the success." This sentence should be revised to read as follows, "Ms. Smith noted that former Naval Station Treasure Island is successfully treating a plume similar to the plume at OU-2C with enhanced bacteria and suggested the Alameda team consider the success."

Michael John Torrey (RAB member) provided the following comments:

- The action items have a page number but appear on a page after the completion of the regular minutes. They should either not be numbered or be included in the minutes without a page of separation. The minutes will be corrected so that the action items are listed as part of the main body of the minutes.

The February 2011 RAB meeting minutes were approved with the above requested modifications, pending Ms. Smith's discussion with Mr. Humphreys to clarify his point.

II. Co-Chair Announcements

Ms. Smith distributed the list of documents received between December 2010 and February 2011 (Attachment B-1). She said that in the future she would distribute the list electronically to all RAB members who have access to electronic files. Bill McGinnis (Navy LRPM) prepared a list of upcoming field work and deliverables (Attachment B-2).

Mr. Robinson asked if the RAB would consider rearranging standard agenda items to help end meetings on time. He suggested moving the community comment period to the beginning of the meeting, and the minute's approval item to the end of the meeting. He said that minutes can be easily approved at a subsequent meeting, but community comments are important. Kurt Peterson (RAB member) expressed a concern that comments should be made after presentations are given, so that comments that result from a presentation can be addressed. Mr. Robinson said comments would be taken during presentations. Mrs. Sweeney suggested comment periods at both the beginning and end of meetings. Mr. Robinson said that does not address the time constraint issue. Ms. Smith suggested voting next month on the suggestion when Mr. Humphreys is present.

Ms. Smith clarified a comment made during the February RAB meeting, stating that a meeting could only be extended by one hour for a total meeting duration of three hours, not an extension of three hours.

Mr. Robinson thanked Richard Bangert (Community member) for his recent article on the website www.theislandofalameda.com regarding Alameda Point activities.

III. New RAB Members

Ms. Smith said she received three applications to join the RAB, and RAB members had reviewed and briefly discussed those applications before the meeting. The RAB members voted to accept new members Carol Gottstein M.D., Richard Bangert, and Daniel Hoy. Ms. Smith welcomed the new members and reminded them that the RAB is focused on environmental concerns, not redevelopment. Mr. Robinson will send information packets to the new RAB members. Mrs. Sweeney asked if each of the new members would introduce themselves. Each new member summarized the information submitted on his or her application. Richard Bangert (RAB member) identified another website containing useful information about the progress of environmental programs at Alameda Point, www.alamedapointinfo.com.

IV. San Francisco Bay Estuary Projects Regional Monitoring Program

Mr. Robinson introduced Karen Taberski of the Regional Water Board to present on the San Francisco Bay (Bay) Estuary projects regional monitoring program (RMP) (Attachment B-3). During the question portion of the presentation, Mr. Torrey asked if she had observed any turkeys in along the estuary in Alameda. Ms. Taberski said she had seen turkeys in the Delta

area, but not at Alameda. Mr. Peterson asked if run off was more of a problem in certain areas. Ms. Taberski said run off is one problem, another is historical contamination in the sediments. Mr. Bangert asked why there is less suspended sediment in San Francisco Bay. Ms. Taberski said the theories are that hydraulic mining has stopped in the hills and the slug of sediment that was being carried from the hills to the Bay has been flushed out. She also stated that the dams upriver are trapping sediment. Mr. Torrey asked what mercury levels have been detected in humans, and how many people have been affected. Ms. Taberski said she was not aware of specific mercury levels in humans or how many people in the Bay Area have been affected. She said people who are concerned about mercury contamination could typically have a health professional conduct a test by taking a hair sample. She said some communities that do subsistence fishing in the Bay that consume high levels of locally caught fish are more at risk. Mrs. Sweeney commented that the mercury levels appear static over time. Ms. Taberski said controls at the largest mercury mine have helped control the amount of mercury getting into the Bay.

Mr. Torrey said the statement in the Seaplane Lagoon fact sheet (dated January 2011) that polychlorinated biphenyls (PCB) were the only chemical in the Seaplane Lagoon that are responsible for potential human health risks (through consumption of fish) is not true. Mr. Robinson said the Seaplane Lagoon fact sheet was accurate and agreed to talk to Mr. Torrey about it, if he needs further information.

Doug deHaan (Alameda City Council) asked about the source of funding for the Estuary RMP. Ms. Taberski said funding comes from permit fees from dischargers and dredgers, and storm water fees. Mr. deHaan asked how the funds support a program that has grown to have over 100 members. Ms. Taberski said that a number of agencies contribute time to the projects. Mr. deHaan asked if the RMP issues any mandates. Ms. Taberski said the RMP is not a regulatory program, but the monitoring arm of the Water Board that provides the answers to questions to help develop the regulations.

Carol Gottstein (RAB member) said she recalls catching the small shiner surfperch in inland lagoons at South Shore, which may still be present in the inland lagoons and asked if residents are aware of the concern of PCB levels in fish. Ms. Taberski said fish caught in the Bay should not be consumed because of PCB levels in general. Mrs. Sweeney asked if there are signs posted warning people not to eat the fish. Ms. Taberski said there are signs posted in a number of languages and a number of agencies, including the health department, are responsible for education programs. Ms. Smith asked if signs are posted in the Seaplane Lagoon, and who is responsible for posting such signs. Ms. Taberski said it is usually a local agency that is responsible for posting the signs.

Dr. Russell (ARRA) asked whether the relatively high concentrations of PCBs in sediment that Ms. Taberski had noted for Oakland Harbor are relevant to Alameda Point only on its north side (Oakland Inner Harbor) or also on its south side (Seaplane Lagoon and other open Bay shoreline). Ms. Taberski said the Oakland Harbor conditions are not expected to be applicable to sediments on the south side of Alameda Point.

Ms. Smith said historical activities have impacted water quality. She said there have been attempts by the EPA to characterize the impacts of contaminants such as arsenic and polycyclic aromatic hydrocarbons (PAH), but no acceptable approach has been provided, thus the need to improve water quality. Ms. Taberski said the Regional Water Board is working with established regulations, including the Clean Water Act Section 303d, listing of impaired waterways. She said there are thousands of waterways on the list, and total maximum daily loads were calculated to identify how much load the Bay could sustain. She said at this time the most effective thing is to control sources, such as runoff from streets, mining and such. Mr. Peterson asked what is being done in areas where heavy metal impacts have been identified in water and sediment. Ms. Taberski said programs began in the early 1990s to identify and cleanup the most toxic sites. Mr. deHaan asked about Ms. Taberski's statement that permit holders fund the monitoring program. He asked why the Navy is not also funding the monitoring program. Ms. Taberski said the Navy is funding the clean up of the site, which is a different program. Mr. deHaan asked if it would be helpful to provide the data the Navy has collected for the monitoring programs use. Ms. Taberski said there is a move to create a single database in the state of California that will collect all sample data collected for comparison.

V. OU-2A Remedies

Mr. Robinson said the Operable Unit (OU)-2A Feasibility Study (FS) Report is being finalized and a Proposed Plan is being prepared. He said there will be additional opportunities to comment on the proposed plan, but this presentation is intended to be a roundtable discussion to review the alternatives in the FS and gives the RAB an opportunity to ask questions (Attachment B-4). Ms. Smith asked if the OU-2A FS Report has been finalized. Curtis Moss (Navy RPM) said the document is in the process of being finalized.

Mr. Robinson reviewed the response actions for soil at Installation Restoration (IR) Sites 9 and 22. Ms. Smith asked why excavations have been planned to go only two feet below ground surface (bgs) in IR Sites 9 and 22. Mr. Moss said analytical results from samples collected deeper than two feet bgs did not exceed comparison criteria. Mr. Peterson asked if any samples were collected inside the buildings within the sites, or only in the open areas outside of the buildings. Mr. Moss said no PAH samples were collected inside buildings in IR Sites 9 or 22. Mr. Peterson asked where the PAHs originated. Mr. Moss said the Navy does not suspect the source is historical dumping, but possibly from the dredge spoils used for fill on the island. Mr. Robinson summarized the alternatives, no action or soil removal, and said the preferred alternative is soil removal. He said the area of removal will be defined during the remedial design phase. Dr. Gottstein asked if future developers will put a gas station in the area. Mr. Robinson said it is possible, but at this point discussions of redevelopment focus on general reuse, such as commercial or residential, the City of Alameda will determine the actual uses.

Mr. Moss discussed the groundwater response action areas at IR Sites 9 and 19. He said the largest concentration of volatile organic compounds (VOCs) is between 30 and 40 feet bgs. Mrs. Sweeney asked how deep the contamination extends. Mr. Moss said analytical results of samples collected between 50 and 60 feet bgs are above drinking water standards. Mrs. Sweeney asked if that is in the second water-bearing zone. Mr. Moss said it is. Mr. Torrey asked the age

of the contamination. Mr. Moss said the sites are downgradient from a former gas station that could be a source. Mr. Torrey explained that he recently learned there was a Chevron refinery located in this area in the late 1800's, which could be a source of the contamination. Mr. deHaan said there had been a major spill in the area at one point in time. Ms. Smith agreed that there was a large jet fuel plume in the area that had previously been cleaned up.

Mr. Moss reviewed the alternatives and described alternative G-2, monitored natural attenuation (MNA) and institutional controls (IC), which is projected to reach MCLs in 22 to 25 years. Mr. Peterson asked how a long-term alternative scored a "good" rank on the "short term effectiveness" criterion. Mr. Robinson said it may be due to sustainability requirements. Mr. McGinnis said the term is defined in the National Contingency Plan (NCP) and scores are based on how a remedy may affect concerns such as green house gas emissions. He said minimizing truck traffic at the site lowers green house gas emissions, which is considered good. Mr. Robinson said that this criterion takes into account short-term impacts to the community, site workers, and the environment during remediation as well as the remediation timeframe. Mr. Peterson said there should be a better term. Mr. McGinnis said there is more detail in the FS Report that explains how the alternative was ranked "good". Mr. Robinson said it is defined that way in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Ms. Smith asked what technology is specified for the in-situ chemical oxidation (ISCO) alternative. Mr. Moss said the remedial alternative in the FS Report is vague because the technologies are proprietary and continue to evolve, so what is available today might not be when the action begins. Mr. McGinnis said that Site 9 has already used ISCO with good results and the Navy will take that into account during the remedial design phase. Mr. Bangert asked about alternatives G-3 (ISCO, MNA and ICs) and G-4 (in-situ bioremediation, MNA and ICs). He said it appears alternative G-4 costs more, yet the results are the same. Mr. Moss said the cost difference between alternatives G-3 and G-4 is that pilot testing for G-4 would be required, and that increases the cost relative to G-3. Ms. Smith said bioremediation should be considered. Jim Sweeney (RAB member) asked if thermal treatment was considered. Mr. Moss said that thermal treatment was evaluated and not considered a viable alternative for this site. Mr. McGinnis said thermal treatment was considered as an alternative earlier in the FS Report preparation.

Mr. Peterson asked how long groundwater had been sampled at the sites. Mr. Moss said samples had been collected over a ten year period. Mr. Peterson asked about alternative G-2 (MNA and ICs) and whether samples collected over the past five years show a decrease in concentrations of contaminants. Mr. Moss said the concentrations have decreased quite a bit. Mr. McGinnis said trend charts are available showing the decrease in concentrations. Mr. Peterson questioned the effectiveness of MNA. Mr. Robinson said ISCO was completed at the site 5 years ago and it has been monitored. Mr. Peterson asked if benzene would break down in 20 to 25 years. Mr. Moss said yes it is likely, if the source is removed. Mr. McGinnis said the goal is to reach drinking water criteria, although groundwater is not used as a drinking water source.

Mrs. Sweeney said her neighbor has a deep well that is used as a source for drinking water and asked if the contaminants would impact the well. She also asked, if there were previous treatments at the site for groundwater, why does it still require additional treatment. Mr. Moss said the plume is not migrating inland towards any neighborhood wells. Mr. McGinnis said the initial treatments were focused in areas with higher concentrations, which resulted in the low concentrations we see today. He said the treatment technologies used previously are not as cost effective on more dilute plumes. He said the earlier actions were interim actions, which can include pilot studies, Non-Time Critical Removal Actions (NTCRA) and Time Critical Removal Actions (TCRA). He said the final remedy for the site is selected in the Record of Decision (ROD) that will be drafted after the Proposed Plan has been completed. Mr. Robinson asked when the City of Alameda will determine the areas for commercial and residential redevelopment. Mr. deHaan said the initial review is being completed, and will be announced to the community in July. Dr. Gottstein asked, if the groundwater is not used as a drinking water source, is it acceptable to use as a source for irrigation of vegetables in gardens. Mr. Robinson said the City of Alameda is not issuing permits for installation of wells in the plume areas. Mr. deHaan said the City of Alameda is issuing permits for new wells in other areas.

Mr. Bangert asked if the groundwater is not being used as a source of drinking water, and if there is no remedy, is there a concern with vapor intrusion. Mr. Moss said the sites currently have no risk from vapor intrusion for commercial/industrial reuse, and are considered to be within the risk management range for residential reuse. Mr. deHaan asked if the water were used for drinking, would it draw from the water bearing zone containing contamination. Mr. McGinnis said drinking water wells would be much deeper, more than 100 feet bgs, below the Yerba Buena Mud. Mr. Moss said the Navy agreed to clean up the site to meet drinking water levels more than 10 years ago, even though the site would likely not be used for drinking water due to the naturally occurring salinity in the water that would not meet the criteria.

Mr. Robinson asked the RAB to vote for their preferred alternative and nine RAB members voted they prefer alternative G-3 (ISCO, MNA and ICs), while two members abstained.

Mr. deHaan asked if the source of the VOC contamination is known. Mr. Moss said the source is the paint stripping activities that were conducted at Building 410. Mr. Moss said it appears the RAB prefers the alternatives that do not take as long to reach the MCLs, although the site is considered safe for commercial/industrial or residential reuse at this time. He said drinking water is supplied by East Bay Municipal Utility District (EBMUD). In response to the comment that cleanup levels must meet drinking water criteria, Melinda Garvey (EPA) clarified that the requirement is an Applicable or Relevant and Appropriate Requirement (ARAR), which is mandated at both the federal and state levels. Ms. Smith said the groundwater could impact the subsurface soil even if it is not considered a drinking water source. Mr. Moss discussed IR Site 13, where benzene is present in groundwater. Mr. Moss reviewed the four alternatives presented. He said the MNA alternative would require about 20 years for groundwater to reach MCLs, and alternatives G13-3 (ISCO, MNA and ICs) and G13-4 (in-situ Bioremediation, MNA and ICs) would reach MCLs within five to ten years. Mr. deHaan asked what previous action had taken place at IR Site 13. Mr. Moss said a petroleum action had been completed at Building 397. John

McGuire (Shaw Environmental, Inc.) said shallow PCBs and lead had been removed from the soil ten years ago.

Mr. Peterson asked why different alternatives were selected for IR Sites 9 and 22 than for IR Site 13, since both have VOC plumes. Mr. Moss said the chlorinated solvents at IR Site 9 are heavier and will sink deeper in the groundwater, while the benzenes tend to float on the water table. Mr. Robinson said the implementability of the treatment must be considered. Mr. Moss explained oxidizing benzene was ranked lower for the implementability criterion due to presence of other petroleum in the area that would use up the oxidant. He added, petroleum hydrocarbons have existed for millennia and bacteria have naturally developed that degrade it well.

Dr. Gottstein asked if the slides could be clarified to show the durations of the proposed remedies, as well as the chemical structure or names of the contaminants of concern. Mr. Moss said the information is contained in the FS Report, but could be added for future presentations.

Mr. Robinson suggested a revision of the alternatives to allow for in-situ treatment, which would allow the contractor to recommend the most effective treatment. Mrs. Sweeney said bioremediation can degrade contamination that other treatments can not reach. Ms. Smith said direct-push bioremediation does not work on a plume like this, but enhanced bioremediation does work. Jim Leach (RAB member) said ozone works best with bioremediation. Mr. Robinson said the option of ozone had been considered but the contractor said it is difficult to implement, and does not extend far enough beyond the well to be effective. Mr. Moss said the ozone could be used to deliver oxygen to the subsurface, not as an oxidant, which would be beneficial to in-situ bioremediation. Ms. Smith clarified the ozone would be used as a treatment medium, not the mechanism. Mr. Robinson asked if RAB members like a flexible alternative that calls for an in-situ treatment but does not specify the technology at this time. Nine RAB members voted that would be their preferred alternative.

VI. Community and RAB Comment Period

Mr. Bangert asked if it would be worth considering combining IR Site 1 and the adjacent IR Site 32, since remedial action at IR Site 1 has been delayed a year and a half. Mr. Robinson said to do that, Site 32 would have to be added to the IR Site 1 ROD. Ms. Smith said IR Site 32 was originally removed from IR Site 1 because of radiological concerns, which is very different from the other concerns. Mr. Robinson said additional characterization at IR Site 32 is planned.

Mr. Peterson said the OU-2A FS roundtable discussion was appreciated and he is interested in participating in more roundtable discussions. He added it is a good way to discuss questions without having to write comment letters. Ms. Smith agreed as long as the discussions occur before the end of a comment period.

Ms. Smith said she will continue to track documents received because it is useful, and going forward will distribute the information to RAB members electronically to those who have

internet access. However, she will continue to make hard copies for those RAB members who do not use the internet.

Ms. Smith said she received the Draft Five Year Review of Alameda Point IR Sites 6, 7, 8, 14, 16, 25, 26 27, 28 and Fleet Industrial Supply Center Alameda, and recommended RAB members review the document as it provides a good summary of what has been happening at the sites for the last five years. Mr. Peterson asked if that would be something the RAB would like to see a presentation about. Ms. Smith said it covers too much information for a RAB presentation.

Mr. Robinson thanked the BCT, RAB members and community for their ongoing support on the project. The meeting was adjourned at 8:37PM. The next RAB meeting will be held at 6:30pm on Thursday April 7, 2011, at 950 West Mall Square, Alameda.

Action Items

Action Items:	Previous Item #/ Action Item Status/ Action Item Due Date:	Initiated by:	Responsible Person:
1. Request for Presentations: <ul style="list-style-type: none"> a. Site 1 Radiological RD/RA work plan b. Injection-extraction field design c. Site 25 Plume Status Tracking d. Site Characterization and Analysis Penetrometer System (SCAPS) Survey of Tarry Refinery Waste 	a./ Pending / April 7, 2011 b./ Pending / April 7, 2011 c./ Pending / April 7, 2011	RAB	Mr. Robinson
2. Provide as-built specifications on the Sites 5 and 10 storm drain replacement to the City of Alameda Public Works	Pending/ April 7, 2011	Mr. Matarrese	Mr. Robinson
3. Contact individual RAB Members that have not been present all of 2010 – Determine their status	Complete / April 7, 2011	Mr. Robinson	Mr. Robinson

Action Items:	Previous Item #/ Action Item Status/ Action Item Due Date:	Initiated by:	Responsible Person:
4. Mr. Robinson will research why Ms. Smith is not receiving documents	Complete / April 7, 2011	Ms. Smith	Mr. Robinson
5. Navy review and reconsider location of IR Site 35 soil staging area in residents memorial garden	Complete / April 7, 2011	Mr. Biggs	Mr. Robinson
6. Mr. Robinson will review comments on the OU2C FS Report and contact Ms. Konrad to discuss further.	Complete / April 7, 2011	Mr. Robinson	Mr. Robinson
7. Mr. Robinson will ask the contractor to review the OU2C FS remedial alternative cost estimates to include an alternative for demolition of Buildings 5 and 5A	Complete / April 7, 2011	Mr. Robinson	Mr. Robinson
8. RAB requested a list of regular contractors and site contacts	Pending / April 7, 2011	Mr. Biggs	Mr. Robinson
9. Follow up on status of fuel lines along seaplane lagoon apron	Pending / April 7, 2011	Mrs. Sweeney	Mr. West
10. Mr. Robinson will distribute new RAB member packets	New / April 7, 2011	Mr. Robinson	Mr. Robinson

ATTACHMENT A

Naval Air Station Alameda Restoration Advisory Board Meeting Agenda, March 3, 2011
(1 page)

RESTORATION ADVISORY BOARD

NAVAL AIR STATION, ALAMEDA

AGENDA

MARCH 3, 2011, 6:30 PM

**ALAMEDA POINT – BUILDING 1 – SUITE 140
COMMUNITY CONFERENCE ROOM
(FROM PARKING LOT ON W MIDWAY AVE, ENTER THROUGH MIDDLE WING)**

<u>TIME</u>	<u>SUBJECT</u>	<u>PRESENTER</u>
6:30 – 6:45	Approval of Minutes	Dale Smith
6:45 – 7:00	Co-Chair Announcements	Co-Chairs
7:00 – 7:20	New RAB Members	RAB
7:20 – 7:40	SF Bay Estuary Projects Regional Monitoring Program	Karen Taberski PhD
7:40 – 8:10	OU-2A Remedies	Curtis Moss
8:10 – 8:30	Community Comment Period	RAB & Community Members
8:30	RAB Meeting Adjournment	

ATTACHMENT B-1

Documents Received December 2010 – February 2011
(1 page)

Documents Received
December 2010 – February 2011

Navy Communication

1. *Addendum 1 to the Final Sampling and Analysis Plan, Alameda Basewide Groundwater Monitoring Program, SES-Tech, December 10, 2010*
2. *Final Biosparge System Installation As-Built Report, OU 5/FISCA IR 02, TetraTech, December 16, 2010*
3. *Final Land Use Control Remedial Design for OU 5/FISCA IR 02 Groundwater, Appendix O, to Final Remedial Design/Remedial Action Work Plan, TetraTech, December 23, 2010*
4. *Final Remedial Action Work Plan, IR 17, Seaplane Lagoon, Battelle Memorial Institute, TetraTech, January 6, 2011*
5. *Draft Final Remedial Design/Remedial Action Work Plan, IR 35, Oneida Total Integrated Enterprises, January 28, 2011*
6. *Final Site Inspection Report Transfer Parcels FED 1A, 2B and 2C, CH2M Hill, January 31, 2011*
7. *Final Radiological Work Plan for Characterization Survey, IR 32, AMEC Earth & Environmental, February 9, 2011*
8. *Draft Five-Year Review of Alameda Point IR 6, 7, 8, 14, 16, 25, 26, 27, 28 and Fleet Industrial Supply Center Alameda, CH2M Hill-Kleinfelder, February 14, 2011*
9. *Final Work Plan for the Pre-design Field Investigation for Remedial Design IR 02, CH2M Hill-Kleinfelder, February 22, 2011*

Agency Communication

1. *Draft Addendum to Final Site Inspection Report, Transfer Parcel EDC-12, Alameda Reuse and Redevelopment Authority, December 6, 2011*
2. *Draft Addendum to Final Site Inspection Report, Transfer Parcel EDC-17, Alameda Reuse and Redevelopment Authority, December 6, 2011*
3. *Draft Addendum to Final Site Inspection Report EDC 17, California Environmental Protection Agency, Department of Toxic Substances Control, Geological Services Unit, December 28, 2010*
4. *Draft Addendum to Final Site Inspection Report Transfer Parcel EDC-17, California Environmental Protection Agency, Department of Toxic Substances Control, Office of Human and Ecological Risk, December 28, 2010*
5. *Addendum to Final Site Inspection Report Transfer Parcel EDC-17, California Environmental Protection Agency, Department of Toxic Substances Control, December 30, 2010*
6. *Draft Record of Decision (ROD), IR 34, California Environmental Protection Agency, Department of Toxic Substances Control, January 13, 2011*
7. *UST 614-1 Closure Summary, San Francisco Regional Water Quality Control Board, dated October 20, 2010, received January 27, 2011*
8. *UST 374-1 & 2 Closure Summary, San Francisco Regional Water Quality Control Board, dated October 20, 2010, received January 27, 2011*
9. *UST 162-1 & 2 Closure Summary, San Francisco Regional Water Quality Control Board, dated October 7, 2010, received January 27, 2011*
Comments on Revised Draft Feasibility Study, OU 2C, IR 5 and 10, Alameda Reuse and Redevelopment Authority, February 1, 2011

ATTACHMENT B-2

Recent and upcoming deliverables and fieldwork schedule
(2 pages)

Active and Upcoming Fieldwork, February 15, 2011
Alameda Point, Alameda, CA

Sites	Start	End*	Description of Fieldwork
Site 26	1/4/2011	1/6/2011	Post-USB Monitoring for GW Quality Parameters
Site 4	1/11/2011	1/14/2011	Plume 4-1 TS DNAPL/Hydrogeological assessment: Installing PITT in Plume & Source Wells and injection/extraction wells. 7-10 days before sample PITT, then dissolution test
Basewide	10/1/2010	2/8/2011	Five-year Review of Post-ROD sites (10). Fieldwork completed
Site 14	2/1/2011	2/10/2011	MNA Monitoring
Site 28 RA	2/18/2011	2/21/2011	Ongoing groundwater monitoring (2nd "quarterly" round)
OU-1 RA	11/15/2010	2/28/2011	Final excavation on western edge of Site 7 completed in January. Site 16, further sampling for pesticides completed inside of Building 608 in JAN11. Results to be forwarded to BCT Feb 11
Basewide	2/16/2011	3/1/2011	Quarterly sampling event - winter 2011.
Basewide	10/13/2010	3/1/2011	Radiological Final Status Surveys of Designated Buildings ongoing.
Site 1	9/30/2010	periodic sampling	Groundwater Pilot Test
Site 2 Pre-design Investigation	2/28/2011	3/17/2011	Pre-design investigation in support of RD (soil gas sampling, geophysical sampling, trenching, etc).
Site 24	3/8/2011	4/8/2011	Pre-design sampling
Site 35 RA	3/16/2011	4/30/2011	Pre-excavation sampling; site excavation, verification sampling, site restoration, and associated field activities
Site 32	3/1/2011	5/31/2011	Radiological Characterization Survey and Sampling
Site 17 Remediation	9/13/2010	12/31/2011	Land support facilities construction began October 18, 2010. Mobilization for IR Site 17 source control remedial activities began the week of November 29, 2010. Dredging to start on January 20, 2011. Dredging to be completed by March 15, 2011.
Site 21 (OU-2B)	1/1/2011	2/1/2012	BLDG 162 Thermal Treatment: Begin Pre-Construction Tasks (i.e., geophys., power distribution, demo inside Bldg 162)
OU-5/FISCA IR02 Remediation	10/6/2008	10/6/2012	Biosparge / vapor extraction system Eastern Biosparge Area construction completed May 2009; Marina Village Western Biosparge Area biosparge area construction completed 10/6/2009. Treatment system running well. Calculated mass reduction of 2,822 pounds of benzene and 69,961 pounds of naphthalene after ~1 year of operation for the Eastern Biosparge Area. Variable frequency drives contributing to efficiency.

* Ordered by End Date

**Recent and Upcoming Deliverables, February 15, 2011
Alameda Point, Alameda, CA**

Recent		
Site	Document	Transmittal Date
Site 32	Final Radiological Characterization Work Plan	1/20/2011
FED Parcel	Final SI	1/28/2011
Site 35	Draft Final RD/RA WP and SAP	1/28/2011

Upcoming		
Site	Document	Transmittal Date
Site 35	Final RD/RA WP and SAP	2/28/2011
Site 24	Final Pre-Design Work Plan	3/4/2011
EDC-12	Draft Final Addendum to Final Site Inspection Report	2/18/2011
EDC-17	Draft Final Addendum to Final Site Inspection Report	2/18/2011
Site 34	Draft Final ROD	3/11/2011
Basewide	Draft CERCLA 5-Year Review	2/10/2011
OU-2B	Draft Final FS	3/26/2011
Sites 5&10	Draft TCRA Completion Report	4/12/2011
Site 1	Draft Remedial Design/Remedial Action Work Plan	5/25/2011

ATTACHMENT B-3

San Francisco Estuary Regional Monitoring Program
(17 pages)

San Francisco Estuary Regional Monitoring Program

- **Founded in 1993**
- **Administered by SFEI**

- **History**
- **Budget**
- **Structure**
- **Program elements**

Karen Taberski
Regional Monitoring Coordinator
SF Bay Water Board

March 3, 2011

The Big Stick

- 1986 SF Bay Basin Plan with toxic pollutant standards
 - By 1987, \$1.2 billion on infrastructure upgrades
 - Almost no data to judge whether management actions were effective
- Section 13267 CWA requests on June 12 1992
 - Part of the NPDES and dredging permits



Teddy Roosevelt and the big stick

The Big Carrot

- Section 13267 CWA requests sent out to dischargers on June 12 1992

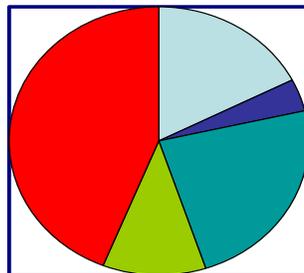


- Reduction of routine effluent and receiving water monitoring
 - 48 permit holders began implementing 1st year (1993)
- Starting in 1991 Water Board conducts pilot studies for design of RMP (water, sediment & sportfish)

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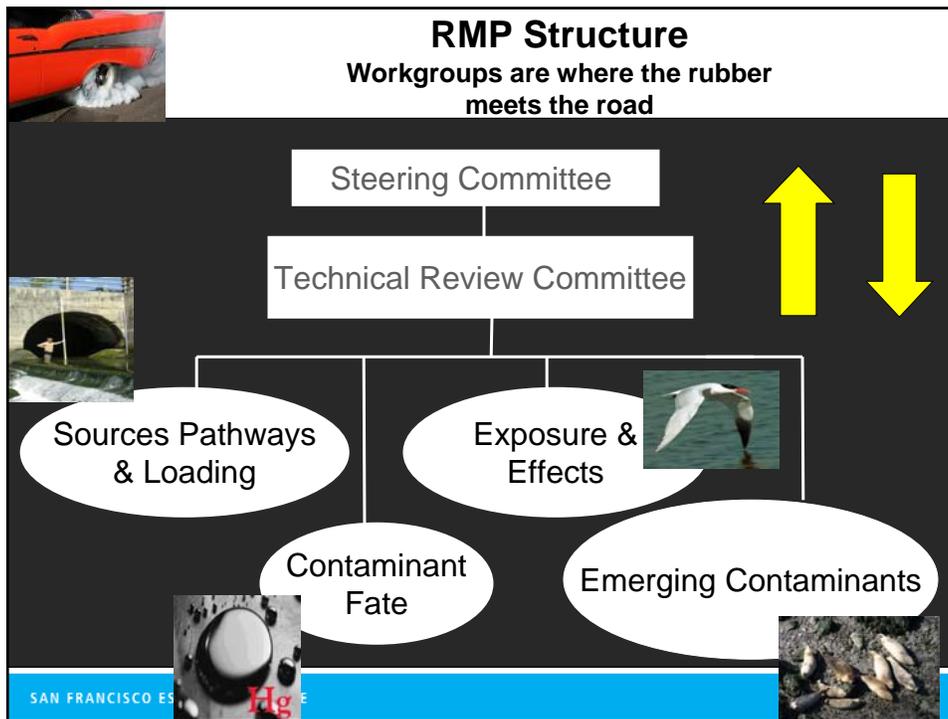
www.sfei.org

Contribution by Sector



■ Dredging (17.5%)
■ Cooling Water (4%)
■ Stormwater (23.5 %)
■ Industrial (11%)
■ Municipal (44%)

- Funded by NPDES dischargers & dredgers
- RWQCB issues permits; MOU with SFEI for fees
- Total budget 2009: ~ \$3.9 million



One Goal...

- Collect data and communicate information about water quality in the San Francisco Estuary to support management decisions

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... and many Management Questions

- MQ1: Are **chemical** concentrations in the Estuary potentially at **levels of concern** and are associated **impacts** likely?
- MQ2: What are **concentrations and masses** of contaminants in the Estuary and its segments?
- MQ3: What are **sources, pathways, loading, and processes** leading to contaminant related impacts in the Estuary?
- MQ4: Have the **concentrations, masses**, and associated impacts of contaminants in the Estuary **increased or decreased**?
- MQ5: What are the **projected concentrations, masses** and associated **impacts** of contaminants in the Estuary?

How does the RMP answer MQs?

Status & Trends Monitoring (1993 -)

- Sediment and water (annually)
- Bivalves (every 2 years)
- Sport fish (every 3 years)
- Bird eggs (every 3 years)

Pilot and Special Studies

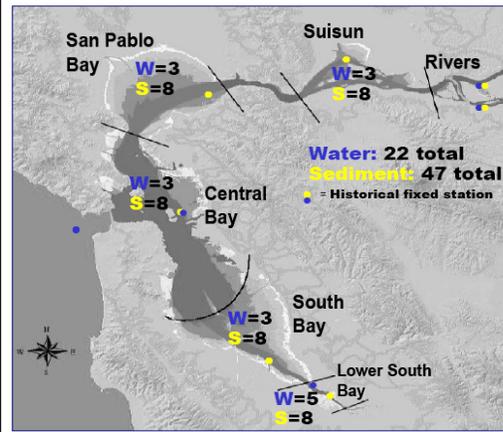
- Provides framework for adaptive management
- Responsive to changing needs



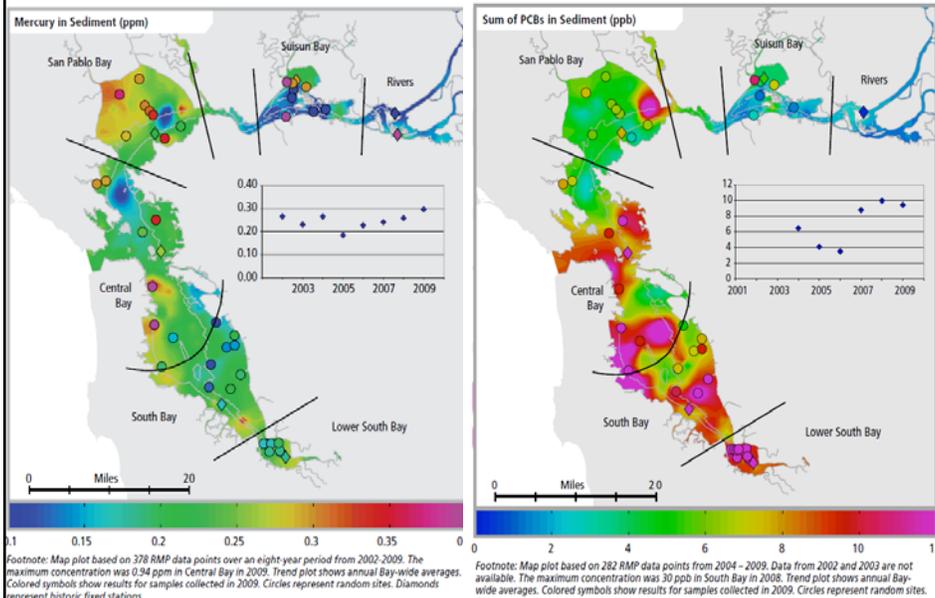


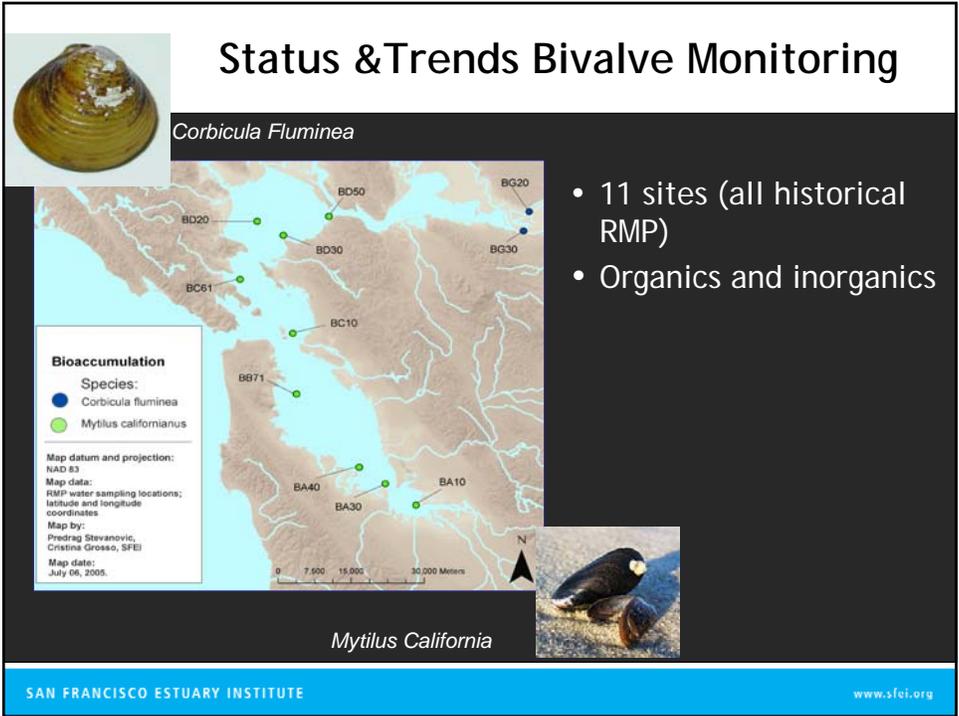
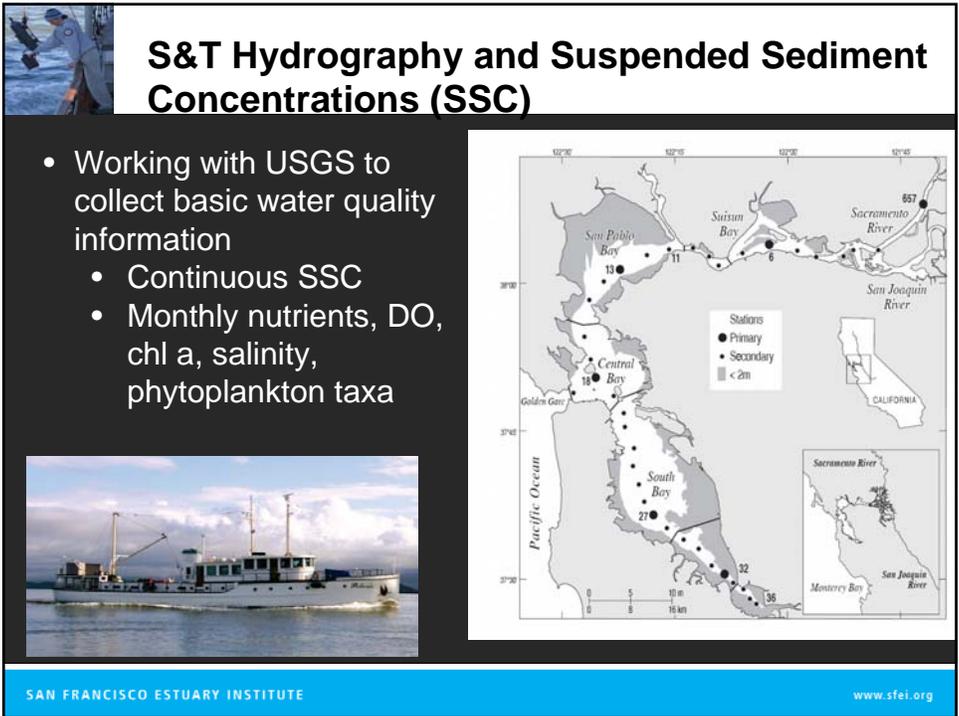
Status & Trends Water & Sediment Monitoring

- 22 Water sites
 - Metals, PAHs, PBDEs, pesticides, & PCBs
- 47 Sediment sites (dry)
 - 22 (wet)
 - Analytes PAHs, PCBs, PBDEs, pesticides, & metals
 - Sediment toxicity and benthos



Status & Trends Hg and PCBs in Sediment




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S&T: Bird Egg Monitoring

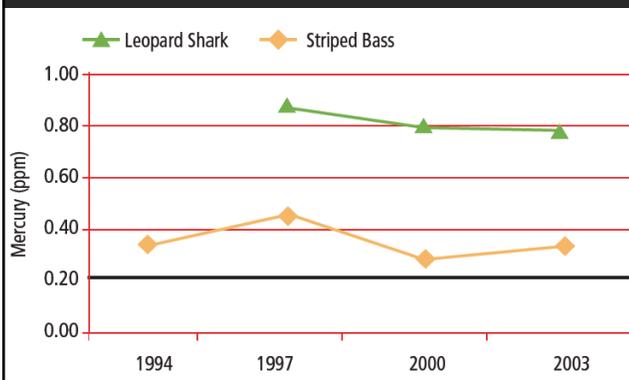
- Cormorants better for trend monitoring of average condition in the Bay
 - Hg, Se, PBDEs, PFCs, PCBs, & pesticides



- Terns better for effects-oriented monitoring, high exposure, shallow habitat, TMDL target
 - Hg, Se, PBDEs

S&T Sportfish Monitoring

- Monitoring to inform management actions
 - PCBs, PBDEs, PAH, dioxin, pesticides, Se, Hg, ECs

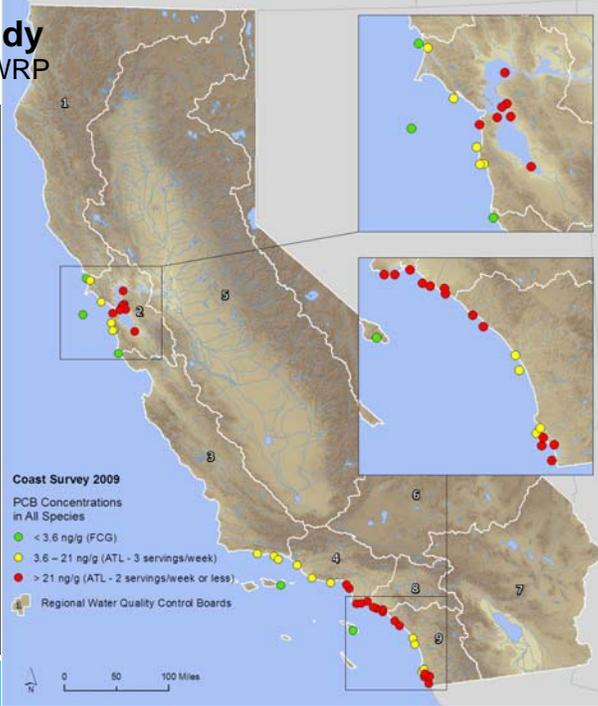


2009 Statewide study
RMP, SWAMP and SCCWRP

PCBs

Six zones had a species averaging more than 120 ppb

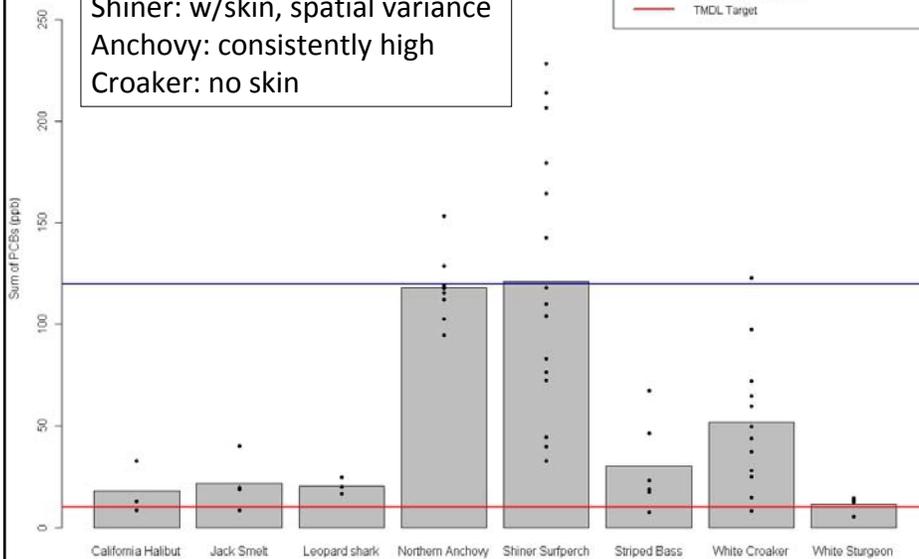
- SD South Bay
- Crystal Cove to Santa Ana River
- San Pedro Bay
- Oakland
- SF Waterfront
- South Bay (anchovy)

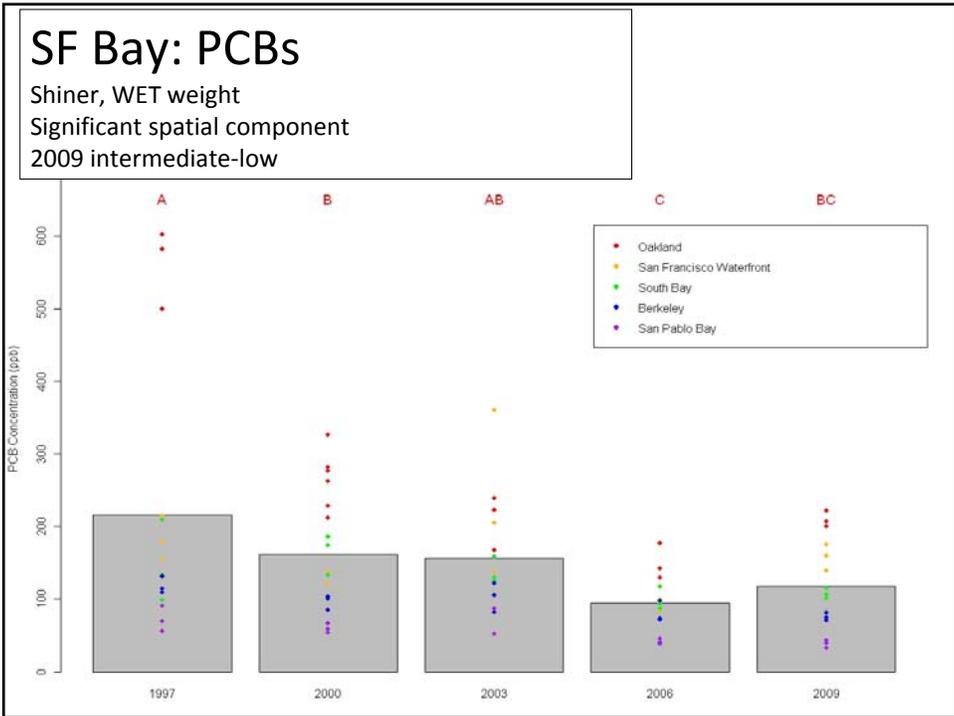
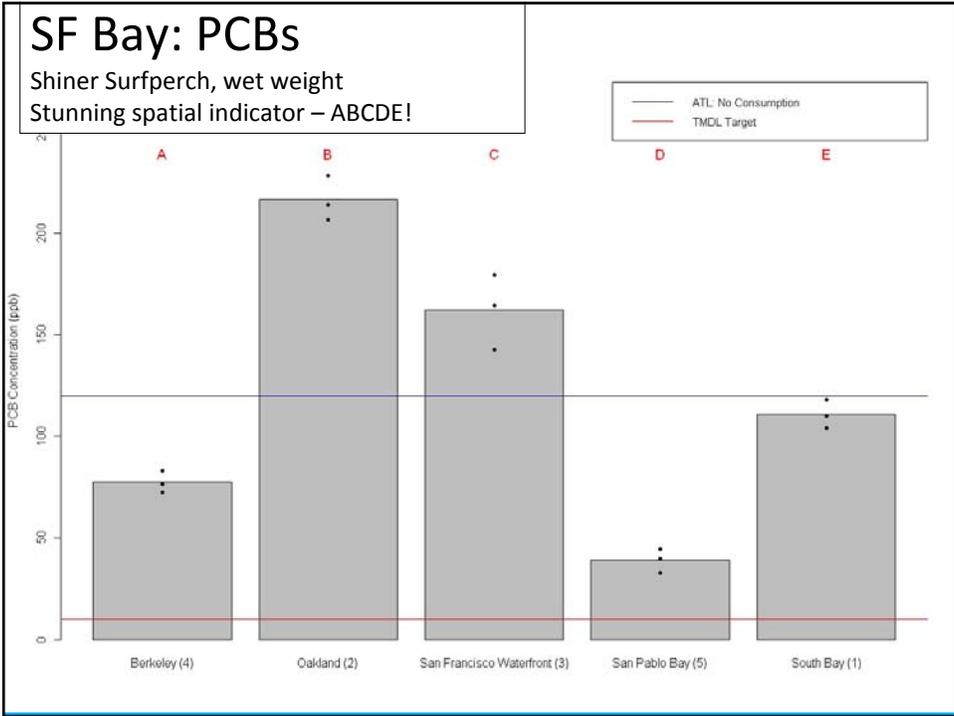


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SF Bay: PCBs

Shiner: w/skin, spatial variance
Anchovy: consistently high
Croaker: no skin





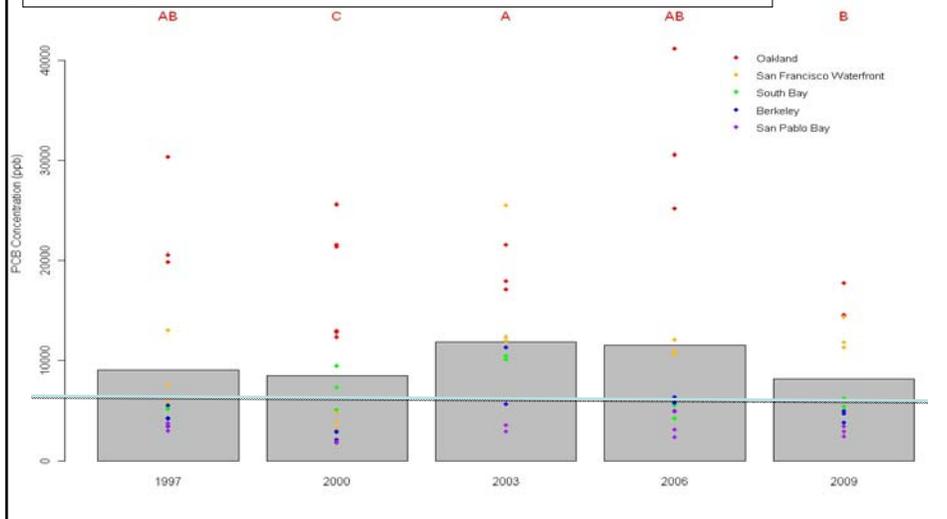
SF Bay: PCBs

Shiner, LIPID weight

Significant spatial component

2009 at low end, but not much different from 1997

Shiner higher than Croaker on lipid basis – looks like spatial effect

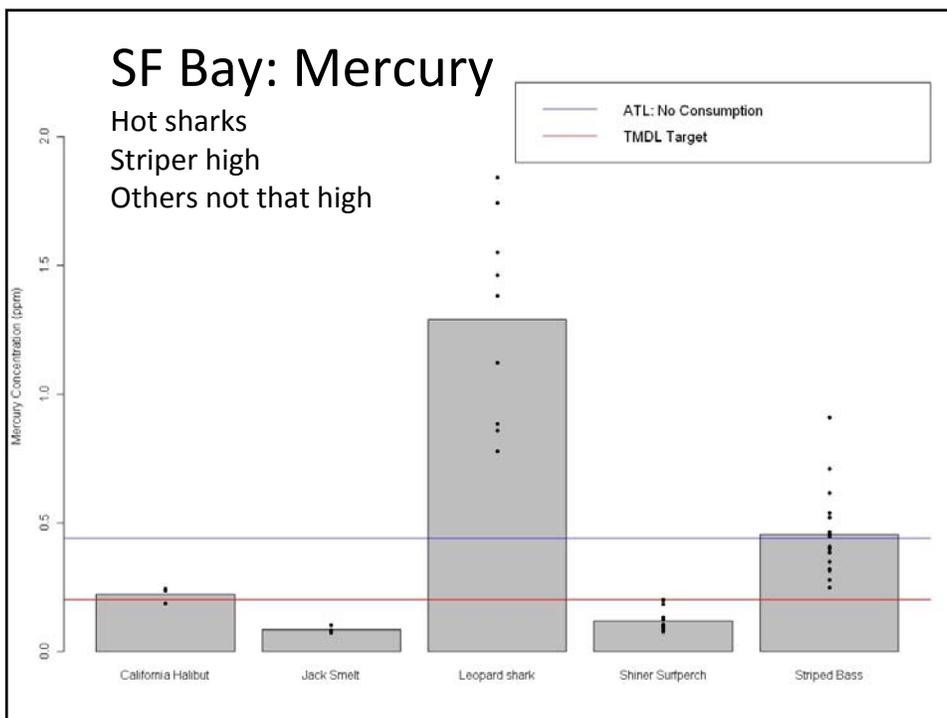


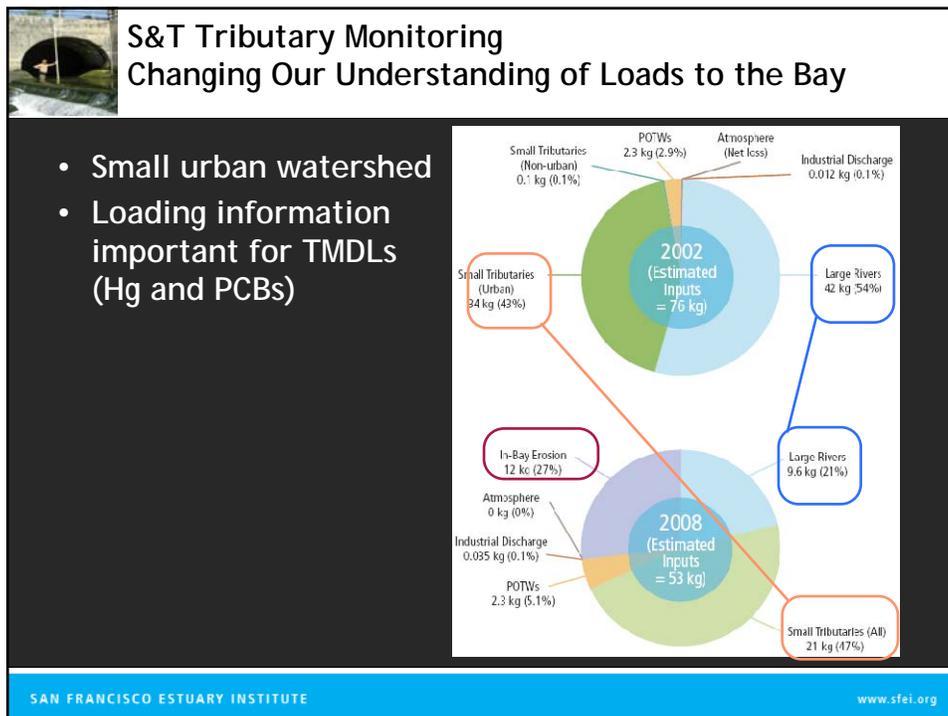
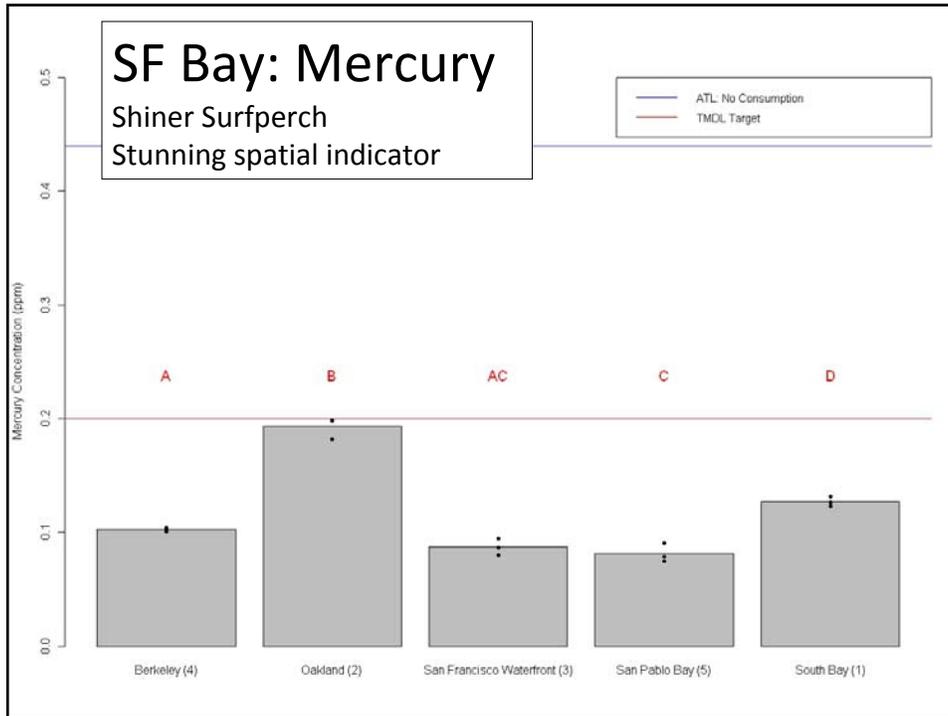
SF Bay: Mercury

Hot sharks

Striper high

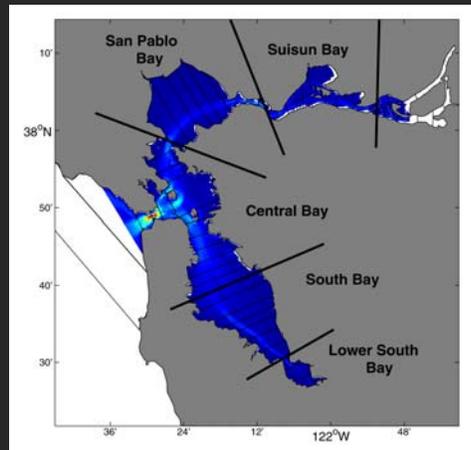
Others not that high





RMP Models

- Foodweb model for PCB TMDL
- Multibox mass budget model
- Watershed model (South Bay)



Strategies

- Strategies for key management issues:
 - Mercury, dioxin, PCBs, modeling, and small tributary loading
 - Primarily developed in the workgroups
- Mercury strategy
 - Annual S&T (sediment, water, fish, and birds)
 - Pilot studies (small fish, isotopes, DGTs)



Mercury Strategy



Key questions:

- Q1 Where is mercury entering the food web?
- Q2 Which processes, sources, and pathways contribute disproportionately to the food web accumulation?

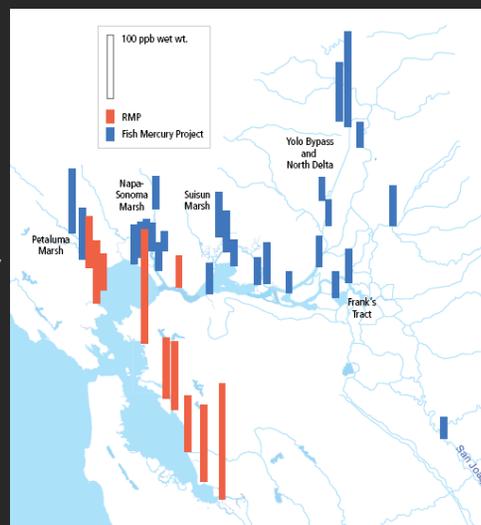


Q1 Where is Hg entering foodweb?



• Small Fish

- Evaluating sources and processes (mine, POTWs, urban runoff, etc.)
- Spatial indicator of mercury exposure and uptake
- Temporal indicator – 1 yr time frame
- TMDL target - 0.03 ug/g



Q2 Hg Strategy: Processes & sources



- Issued an RFP to answer Q2
- Hg Isotopes – U of Michigan
 - Potential to fingerprint sources
- Diffusive Gradient Thin Films – Trent University
 - Surrogate for MeHg uptake





sediment pore water

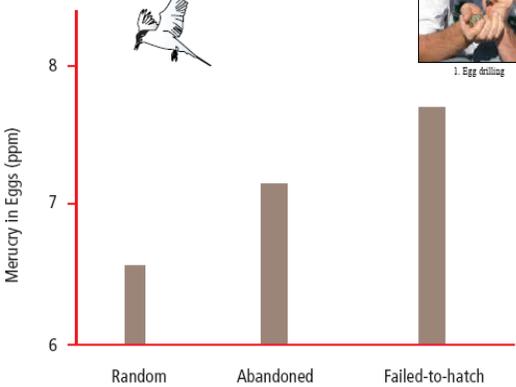
water

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Pilot Studies: Hg and bird eggs



- USGS developed bird egg thresholds



Category	Mercury in Eggs (ppm)
Random	~6.5
Abandoned	~7.1
Failed-to-hatch	~7.6

Footnote: Total mercury on a dry weight basis.





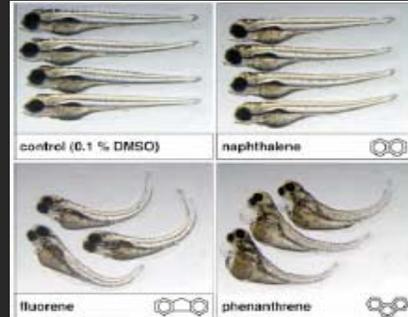

1. Egg drilling
2. Albumin micro-sampling
3. Egg sealing
3. Egg replacement and monitoring

- Higher Hg correlates with decreased hatching success
- Current target protective

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Pilot studies: Effects of PAH on Juvenile Flatfish

- NOAA study to determine potential endpoints and effects of higher molecular PAHs on developing flatfish
 - 2 yr study. 1st year working with a model fish
 - 2nd year. Applying first year results to Bay Area fish and environmental sediment samples



Adapting the program

- Changing regulatory focus
 - Increase focus on biota in TMDLs (e.g., fish and birds)
- New chemicals of emerging concern

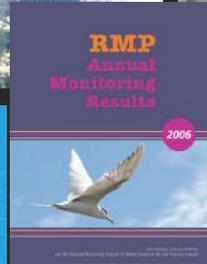


Many different ways of disseminating information

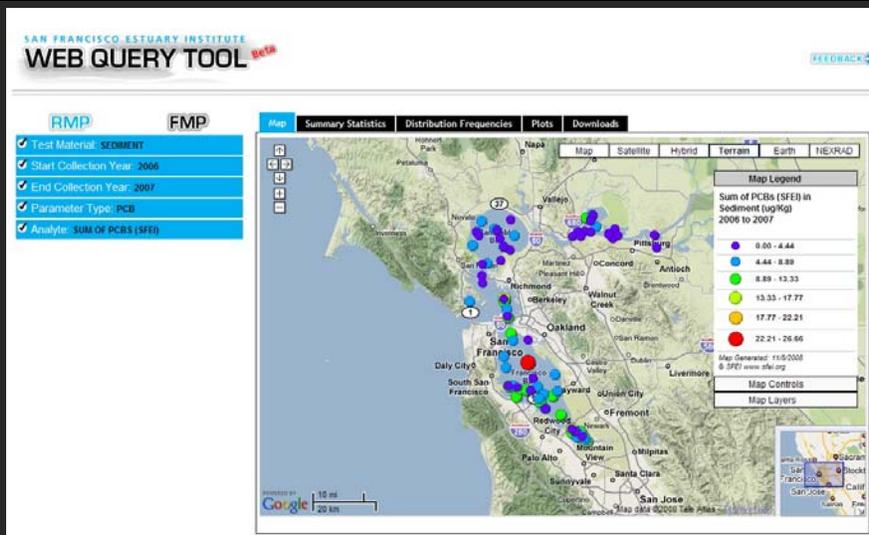
- Pulse
- Technical reports
- Journal articles
- RMP annual meeting
- Workshops on select topics
- Web query



2009
MERCURY
MEETING



Providing easy access to data



Thanks to our many supporters and collaborators

- RMP participants (Bridgette DeShields (Refineries), Eric Dunlavey (City of San Jose), Ellen Johnck (Dredging Community), Mike Kellogg (City of San Francisco), Chris Sommers (Stormwater) and the other 80 plus participants)
- RWQCB staff (Karen Taberski, Tom Mumley, Naomi Feger,)
- USEPA (Terry Flemming)
- Research and academic community including USGS, UC-Davis, UC-Santa Cruz, UC-Berkeley, NOAA
- SFEI staff ~ 30 individuals dedicated to collecting and reporting the best data possible

Questions?



All of RMP data and reports are available on-line at www.sfei.org

ATTACHMENT B-4

Operable Unit -2A Feasibility Study Results
(4 pages)



Welcome



Alameda RAB Meeting Operable Unit-2A Feasibility Study Results Former NAS Alameda

Curtis Moss, PG
Project Manager
Navy BRAC PMO West

March 3rd, 2011



Operable Unit 2A Sites 9, 13, 19, 22, 23



MEETING GOAL -- Discuss Feasibility Study alternatives for OU-2A with the RAB and receive feedback



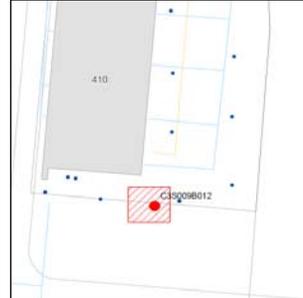


Site 9 Soil- PAH Response Action



Site 9 soil excavation area:

- Defined by Total Benzo(a) Pyrene above 1.0 mg/kg
- Extent to be determined
- Future land use - unrestricted



Site 22 soil excavation area:

- Defined by Lead above 315 mg/kg
- Extent to be determined
- Future land use - unrestricted



FS Evaluation – Soil Sites 9 & 22



NCP Criterion	S-1: No Action	S-2: Excavation and Off-Site Disposal of Impacted Soil (Residential Reuse)
<i>Overall Protection of Human Health and the Environment</i>	○	●
<i>Compliance with ARARs</i>	○	●
<i>Long-Term Effectiveness</i>	○	●
<i>Reduction in Toxicity, Mobility, and Volume</i>	○	●
<i>Short-Term Effectiveness</i>	○	○
<i>Implementability</i>	●	○
<i>Cost</i>	--	Site 9 = \$471,000 Site 22 = \$324,000
<i>State and Community Acceptance</i>	TBD	TBD

○ Poor ○ Fair ● Good

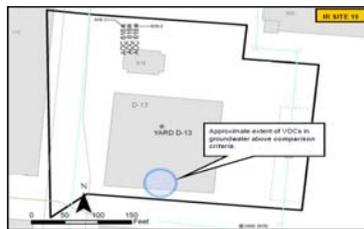
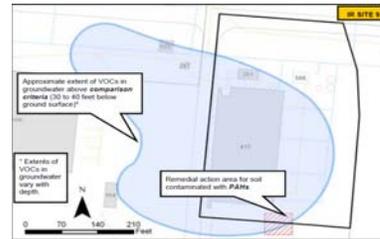


Site 9 Soil & Groundwater Response Action Areas



Site 9 groundwater area:

- Defined by volatile organic compounds
- Monitoring dependent on selected remedy



Site 19 groundwater area:

- Defined by volatile organic compounds
- Monitoring dependent on selected remedy

5



FS Evaluation – Groundwater Sites 9 & 19



NCP Criterion	G-1: No Action	G-2: MNA and ICs	G-3: ISCO, MNA and ICs	G-4: In-Situ Bioremediation, MNA and ICs
<i>Overall Protection of Human Health and the Environment</i>	○	●	●	●
<i>Compliance with ARARs</i>	--	●	●	●
<i>Long-Term Effectiveness</i>	○	◐	●	●
<i>Reduction in Toxicity, Mobility, and Volume</i>	○	◐	●	●
<i>Short-Term Effectiveness</i>	●	●	◐	◐
<i>Implementability</i>	●	●	◐	○
<i>Cost</i>	\$0	\$3,513,000	\$4,611,000	\$7,014,100
<i>State and Community Acceptance</i>	TBD	TBD	TBD	TBD

○ Poor ◐ Fair ● Good

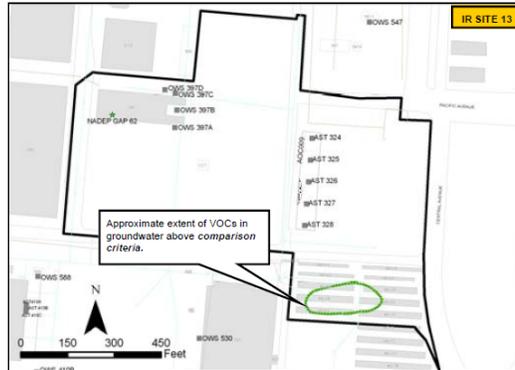


Site 13 Groundwater



Site 13 groundwater area:

- Defined by volatile organic compounds
- Monitoring dependent on selected remedy



FS Evaluation – Groundwater Site 13



NCP Criterion	G13-1: No Action	G13-2: MNA and ICs	G13-3: ISCO, MNA and ICs	G13-4: In-Situ Bioremediation, MNA and ICs
<i>Overall Protection of Human Health and the Environment</i>	○	●	●	●
<i>Compliance with ARARs</i>	--	●	●	●
<i>Long-Term Effectiveness</i>	○	◐	●	●
<i>Reduction in Toxicity, Mobility, and Volume</i>	○	◐	●	●
<i>Short-Term Effectiveness</i>	●	◐	●	●
<i>Implementability</i>	●	◐	○	◐
<i>Cost</i>	\$0	\$2,435,000	\$2,103,000	\$2,364,000
<i>State and Community Acceptance</i>	TBD	TBD	TBD	TBD

○ Poor ◐ Fair ● Good